

Ixekizumab

Cat. No.:	HY-P9924
CAS No.:	1143503-69-8
Target:	Interleukin Related
Pathway:	Immunology/Inflammation
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	Ixekizumab (LY2439821) is a humanized IgG4 monoclonal antibody that selectively binds and neutralizes interleukin IL-17A ($K_D < 3$ pM). Ixekizumab directly blocks IL-17A binding to IL-17RA (IL-17A receptor) but does not bind to other IL-17 family members. Ixekizumab is used for the research of moderate-to-severe plaque psoriasis ^{[1][2]} .								
IC₅₀ & Target	IL-17								
In Vitro	<p>The equilibrium K_D of Ixekizumab for human and cynomolgus monkey IL-17A were 1.8 pM and 0.8 pM, respectively. Ixekizumab also bound to rabbit IL-17A, but the affinity was lower, and the binding was heterogeneous (K_D of 1.3 nM and 14 nM). Ixekizumab shows no binding to either mouse or rat IL-17A^[1].</p> <p>Ixekizumab (0.1-10000 pM) inhibits human IL-17A- or human IL-17A/F heterodimer-induced growth-regulated oncogene (GRO)α secretion from HT-29 cells in a dose-dependent fashion. Ixekizumab inhibits cynomolgus monkey IL-17A-induced GROα secretion from HT-29 cells in a dose-dependent fashion^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>								
In Vivo	<p>Ixekizumab (0.001-1 mg/kg; i.v.) is able to decrease human IL-17A-induced keratinocyte chemoattractant (KC) secretion in the plasma of the C57BL/6 mice in a dose-dependent manner^[1].</p> <p>In male cynomolgus monkeys, following IV administration of 1 mg/kg, Ixekizumab is eliminated with a mean half-life of 6.5 days. After SC administration of 1 mg/kg, Ixekizumab reaches an average maximal plasma concentration of 11.1 μg/mL ~72 hours postdose. The mean elimination half-life following the SC injection was 10.3 days^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1"> <tr> <td>Animal Model:</td> <td>C57BL/6 mice (n=5 per group, 8-12-week old, subcutaneous injection of human IL-17A)^[1]</td> </tr> <tr> <td>Dosage:</td> <td>1 mg/kg, 0.1 mg/kg, 0.01 mg/kg, or 0.001 mg/kg (corresponding to 20 μg, 2 μg, 0.2 μg, and 0.02 μg per mouse, respectively)</td> </tr> <tr> <td>Administration:</td> <td>I.v.; 1 hour prior to a subcutaneous (SC) injection of human IL-17A</td> </tr> <tr> <td>Result:</td> <td>Decrease human IL-17A-induced KC secretion in the plasma of the C57BL/6 mice in a dose-dependent manner.</td> </tr> </table>	Animal Model:	C57BL/6 mice (n=5 per group, 8-12-week old, subcutaneous injection of human IL-17A) ^[1]	Dosage:	1 mg/kg, 0.1 mg/kg, 0.01 mg/kg, or 0.001 mg/kg (corresponding to 20 μ g, 2 μ g, 0.2 μ g, and 0.02 μ g per mouse, respectively)	Administration:	I.v.; 1 hour prior to a subcutaneous (SC) injection of human IL-17A	Result:	Decrease human IL-17A-induced KC secretion in the plasma of the C57BL/6 mice in a dose-dependent manner.
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REFERENCES

[1]. Liu L, et al. Generation and characterization of ixekizumab, a humanized monoclonal antibody that neutralizes interleukin-17A. J Inflamm Res. 2016;9:39-50. Published 2016 Apr 19.

[2]. Griffiths CE, et al. Comparison of ixekizumab with etanercept or placebo in moderate-to-severe psoriasis (UNCOVER-2 and UNCOVER-3): results from two phase 3 randomised trials. Lancet. 2015;386(9993):541-551.

Caution: Product has not been fully validated for medical applications. For research use only.

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